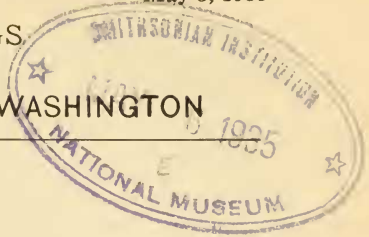


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NEW BIRDS FROM NORTHWESTERN MEXICO.

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Prosecution of studies of rapidly accumulating collections from Sinaloa for the California Institute of Technology has revealed several new races, two of which I am describing in this paper. It had been planned to publish the descriptions in the contemplated report on the birds of Sinaloa, but as its publication will be delayed to permit the inclusion of a mass of new material, it seems wise to follow the advice of fellow-workers to release these descriptions currently in order that the findings may be available to taxonomists prosecuting work in adjacent areas.

For permission to examine specimens in their collections, my acknowledgments are gratefully offered to Dr. Alexander Wetmore and Dr. Herbert Friedmann of the Smithsonian Institution, Mr. John T. Zimmer of the American Museum of Natural History and Mr. James L. Peters of the Museum of Comparative Zoölogy.

On May 4, 1934, the author started with pack animals and assistants from the Guirocoba Ranch near Alamos in southeastern Sonora on a zoölogical reconnaissance, crossed the junction of the Rio Chinipas and the Rio Fuerte on May 6th, and began the long four-day ascent of the western face of the Mexican tableland. On May 11th to 13th a region of canyons was crossed, where powerful streams are flanked by massive oaks and cedars, and humid conditions have draped rock and tree with moss. Continuing eastward, the brink of the vast canyon of the Barranca del Cobre was reached on May 15th. As dry as the Arroyo Hondo is humid, this great canyon system, somewhat recalling in proportions the Grand Canyon of the Colorado, conveys the waters of the Uriqui River to their ultimate juncture with the Rio Fuerte and on to the Pacific Ocean on the west coast of Mexico. The latter, arid throughout its course across northern Sinaloa, passes through cactus country, and was followed by our party from Choix westward nearly to the coast, a few weeks later. Although a stretch

of about twenty-five miles of this river course (from Choix, Sinaloa, to Churo, Chihuahua) was not observed by us, there is little doubt that arid conditions are nearly continuous throughout its length and that this river provides a migration route, which birds, preferring arid conditions, follow from Chihuahua into northern Sinaloa. The relation of this arid river system to the region of humid canyons to the west and north, on the face of the Mexican plateau, will be discussed in a later paper. Enough has been said to indicate why several resident species, such as *Ptilogonys* described below, are humid area birds, whereas others confine themselves to dry conditions.

***Ptilogonys cinereus otofuscus*, subsp. nov.**

CHIHUAHUA PTILOGONYS.

Type.—Male adult; No. 9220, collection of Robert T. Moore; Arroyo Hondo, Chihuahua, Mexico (about thirty miles northeast of junction of Rio Chinipas and Rio Fuerte in southwestern Chihuahua); May 27, 1934; collected by Robert T. Moore.

Subspecific characters.—Nearest to *Ptilogonys cinereus molybdophanes* Ridgway of Guatemala, but color above lighter; gray of under parts not extending so far on the abdomen; rump somewhat lighter than back instead of being uniform with it; auricular region with a tendency to be darker.

This Chihuahua race differs more distinctly from the forms which lie geographically near to it, such as *Ptilogonys cinereus pallescens* Griscom of Guerrero, *Ptilogonys cinereus cinereus* Swainson from Temascaltepec and a series from Jalapa in Vera Cruz, than it does from *molybdophanes*. Males of *otofuscus* differ from a series of *cinereus*, recently collected for the Institute by W. W. Brown at Temascaltepec, in that the males are much darker bluish-gray above with no cast of brown; top of head bluish-gray rather than brownish-gray; auricular region much darker (Fuscous¹ to Fuscous-Black instead of Clove Brown); chin and throat whiter; lower throat and breast darker blue-gray without brownish tinge; flanks darker olive green. Females of *otofuscus* have rump and upper tail-coverts much lighter (grayer); back grayer and more uniform with crown; lower throat and breast darker brown. Compared with *cinereus pallescens* Griscom of Guerrero, the new race is distinctly darker on back and lower throat in males and much darker brown on lower throat and breast in females.

Range.—The series, which I collected in the Arroyo Hondo, seem to constitute the only record for Chihuahua. Frazar seems to have missed it on his ascent from Alamos to Pinos Altos, which took him only 25 miles north of the Arroyo Hondo. No *Ptilogonys* were reported by W. De W. Miller from southern Sinaloa or northwestern Durango. Godman, in the *Biologia Centrali Americana*, states that its northermost recorded localities are Guanajuato and the Sierra Madre near Colima, but Ridgway records it from El Salto in southern Durango. It does not seem likely that a gap of several hundred miles occurs in the range; further collecting may be

¹ Capitalized names of colors in paper are taken from Ridgway, *Color Standards and Color Nomenclature*, 1912.

expected to reveal this bird in the intervening area, although our collectors have not secured a specimen during two years of work in the mountains of northeastern and southeastern Sinaloa.

Specimens examined.—Temascaltepec (*cinereus cinereus*) 9; Jalapa, Vera Cruz (*cinereus*) 9; Jalisco and Tepic (intergrades between *cinereus* and *pallescens*) 17; Guerrero (*pallescens*) 13; Guatemala (*molybdophanes*) long series in Mus. Comp. Zool.; Chihuahua (*otofuscus*) 9.

Remarks.—The Type of *Ptilogonys cinereus* Swainson is given as the "table lands of Mexico." It is quite probable that my fresh specimens from Temascaltepec (an old type locality of Swainson) are topotypical and I suggest that the "table lands of Mexico" of the original description be restricted to Temascaltepec. These specimens, taken chiefly in the middle of June, are comparable in plumage with my series from Chihuahua, all secured May 27th, and with May specimens of *pallescens* from Guerrero. The birds from Vera Cruz were collected in March and April and their darker color may be due to this earlier date. Care must be taken to contrast similar plumages, but there is adequate material to do this. It is rather unusual that the two light forms, namely, *pallescens* of Guerrero and *cinereus cinereus* of the central Mexican plateau are found geographically between the darkest form, *molybdophanes* of Guatemala, and the almost equally dark race, *otofuscus* of Chihuahua. This would be inexplicable, if the new form were a bird of the arid region of northwestern Mexico. On the contrary it seems to be confined to the humid canyons which dissect the western face of the Mexican plateau. Like its congeners to the south, it ranges from 5000 to 7000 feet in altitude on the canyon walls foraging for berries of the orange-barked Mandrono tree. It was not found in the arid Baranca del Cobre, not 25 miles away, where this tree was lacking.

***Phloeocastes guatemalensis dorsofasciatus*, subsp. nov.**

SONORA IVORY-BILL.

Type.—Male adult, No. 5430, collection of Robert T. Moore; Guirocoba, Sonora, Mexico; Feb. 7, 1932; collected by J. T. Wright.

Subspecific characters.—Similar to *Phloeocastes guatemalensis regius* (Reichenbach) of Eastern Mexico, but somewhat smaller; lower throat and breast darker, the black more intense and glossy, the light bars darker and nearer Clay Color, the light bars of the lower half of the under parts whiter; under side of outer rectrices not concolor but Deep Olive-Buff along shaft, Olive-Brown on outer half. Females have black plumes longer than the red ones.

NOTES ON CHARACTERS.

The new race seems to differ from all other races of *guatemalensis*, in having the middle of the lower back barred black and white, particularly in the males, and the bars of abdomen averaging more numerous. Perhaps the most important difference is found in the females. The black plumes of adult birds in every one of the 9 females from Sonora and northern

Sinaloa are longer than the red plumes, averaging 6.3 mm. longer, whereas in all southern races the black plumes average shorter than the red and in *nelsoni* of the west coast and the forms from the east coast they are equal. Comparing males with the geographically adjacent race of *nelsoni* of Guerrero, we find the new race differs more markedly from it, being distinctly larger and darker, the back stripes and the light bars below decidedly more buffy, as compared with the almost pure white of *nelsoni*. The birds of the mountains of southern Sinaloa are intergrades between *dorsofasciatus* and *guatemalensis* of southern Mexico and Guatemala.

Range.—Alamos district of southern Sonora and the foothills and mountains of Sinaloa to an altitude of at least 6000 feet. The new race reaches sea-level in southwestern Sinaloa, 3 of our 33 specimens coming from Quelite and Rosario and 3 more from an altitude of 1000 feet on the Rio Las Canas in northwestern Nayarit.

Specimens examined.—Sonora, Sinaloa and Nayarit (*dorsofasciatus*) 50; Guerrero, Michoacan, Colima and Tepic (*nelsoni*) 18; Jalisco, Oaxaca, Quintana Roo (intergrades) 6; Honduras, Guatemala, San Salvador (*guatemalensis*) 22; Panama, Costa Rica (*buxans* of Bangs) 23; Vera Cruz, City of Mexico (*regius*) 13; Tamaulipas, "Tolosa" (*regius*?) 23; total 155.

Remarks.—The differentiation of the races of *Phloeocastes* has been marked by the misfortune, common to so many species of Mexican birds, in that the regions of intergrades were searched most diligently, whereas the habitat of the races on the periphery was not combed until a later date. As a result, the first form to be described—*guatemalensis guatemalensis*—is probably an intergrade and on the other hand one of the most distinct forms, the bird of Tamaulipas, may have to remain nameless, due to the fact that *C[ampephilus] regius* Reichenbach was described from a specimen obtained at Papantla, central Vera Cruz, half way between the center of distribution of the Tamaulipas form and the smaller bird of southern Vera Cruz. The author has in manuscript a review of the races of *Phloeocastes*, so that nothing further will be said here, except that as in other Mexican mountain forms, which tend to spill over to sea-level on either side of the Mexican plateau, the southcentral Mexican region seems to be a great melting pot, where the characters of the races to the north and south are jumbled together in a puzzling way. Based on critical examination of many forms, it is indicated that the birds of the mountain areas of southeastern Sonora, southwestern Chihuahua and eastern Sinaloa have closer affinities with the mountain forms of central and eastern Mexico, than with the geographically nearer coastal forms of western Mexico.

The three birds from the Sinaloa coastal plain area, Quelite to Rosario, taken from Jan. 3d to Feb. 10th in unworn plumage, are decidedly browner (Rusty Brown) on primaries, tail and lower back than the rest of the specimens from the mountains, taken in exactly the same stage of moult and period of the year. One specimen from the Rio Las Canas, Nayarit, resembles them somewhat. It would seem that the intense sun of the dry coastal plains has burned and browned the exposed portions of the feathers. Whether these are racial characters, developing in arid conditions, can not be determined without more adequate material.